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WHAT IS CLAIMED IS:

1. A method of optimizing at least two target machines, comprising the steps of:  
abstracting a rule of instruction scheduling for each of said at least two  
5 target machines;  
generating a hypothetical machine based on said rule of instructions; and  
targeting said hypothetical machine.
2. The method of claim 1 wherein a rule of instruction scheduling for said  
10 hypothetical machine is a restrictive set of said abstracted rules of instruction  
scheduling of said at least two target machines.
3. The method of claim 1 further including the steps of:  
detecting a conflict between said abstracted rules of instructions; and  
15 resolving said conflict.
4. The method of claim 3 wherein said step of resolving said conflict  
includes the step selecting the less damaging option of said detected conflict.
- 20 5. The method of claim 3 wherein said detected conflict corresponds to a  
conflict between a rule of instruction of one of said at least two target machines  
and a rule of instruction of another of said at least two target machines.
6. The method of claim 1 further including the steps of:  
25 modeling each of said at least two target machines; and  
retrieving scheduling information corresponding to each of said at least  
two target machines.
7. The method of claim 1 wherein said at least two target machines include  
30 an UltraSPARC-II configured to operate at a speed of 360 MHz and an  
UltraSPARC-III configured to operate at a speed of 600 MHz.

8. A method of optimizing at least two target machines, comprising the steps of:

5 retrieving scheduling information corresponding to each of said at least two target machines;

abstracting a rule of instruction scheduling for each of said at least two target machines;

generating a hypothetical machine based on said rule of instructions; and  
targeting said hypothetical machine.

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9. The method of claim 8 further including the steps of:

detecting a conflict between said abstracted rules of instructions; and  
resolving said conflict.

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10. The method of claim 9 wherein a rule of instruction scheduling for said hypothetical machine is a restrictive set of said abstracted rules of instruction scheduling of said at least two target machines.

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11. The method of claim 9 wherein said step of resolving said conflict includes the step selecting the less damaging option of said detected conflict.

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12. The method of claim 9 wherein said detected conflict corresponds to a conflict between a rule of instruction of one of said at least two target machines and a rule of instruction of another of said at least two target machines.

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13. An apparatus for optimizing at least two target machines, comprising:  
means for abstracting a rule of instruction scheduling for each of said at least two target machines;  
means for generating a hypothetical machine based on said rule of instructions; and

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means for targeting said hypothetical machine.

14. The apparatus of claim 13 wherein a rule of instruction scheduling for said hypothetical machine is a restrictive set of said abstracted rules of instruction scheduling of said at least two target machines.

15. The apparatus of claim 13 further including:  
means for detecting a conflict between said abstracted rules of instructions; and  
means for resolving said conflict.

16. The apparatus of claim 15 wherein said resolving means includes means for selecting the less damaging option of said detected conflict.

17. The apparatus of claim 15 wherein said detected conflict corresponds to a conflict between a rule of instruction of one of said at least two target machines and a rule of instruction of another of said at least two target machines.

18. The apparatus of claim 13 further including:  
means for modeling each of said at least two target machines; and  
means for retrieving scheduling information corresponding to each of said at least two target machines.

19. An apparatus for optimizing at least two target machines, comprising:  
means for retrieving scheduling information corresponding to each of said at least two target machines;  
means for abstracting a rule of instruction scheduling for each of said at least two target machines;  
means for generating a hypothetical machine based on said rule of instructions; and

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means for targeting said hypothetical machine.

20. An apparatus for optimizing a plurality of target machines, comprising:

means for modeling a plurality of target machines;

5 means for retrieving scheduling information corresponding to each of  
said plurality of target machines;

means for abstracting a rule of instruction scheduling for each of said  
plurality of target machines;

10 means for generating a hypothetical machine based on said rule of  
instructions;

means for targeting said hypothetical machine;

means for detecting a conflict between said abstracted rules of  
instructions; and

15 means for resolving said conflict.